

January 3, 1947.

Dr. J. R. Preer,
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Dear John:

Leaving Chicago, I had the pleasure of Lindegren's company for a long time on a slow I.C. train. In the course of our conversation, I learned his current views on kappa, and I think that his objections while they are probably unfounded have not been understood. There is no question as to the role of the cytoplasm in the transmission of kappa, nor that it is present there in large quantities. However, I agree with him that there is little direct evidence that kappa reproduces itself away from the gene. His picture of kappa multiplying at the locus of λ can only be refuted now by kinetic evidence on the mode of multiplication of kappa.

In your scheme for enumerating kappa, you presuppose that it is autocatalytic. Have you examined the possibility that at low levels of kappa the rate of its increase is independent of kappa concentration? I've tried very superficially to set up the formulae, but have not done more than restate your empirical experiments in the form of recursion formulae:

n number of cell divisions
 a_n conc. kappa at the beginning of the n th fission
 r_n conc. kappa at the end of the n th fission.

I would like very much to see the mathematical treatment which you referred to in your talk, and to receive your comments on the matter above. We all, of course, enjoyed your talk very much indeed.

Sincerely,

Joshua Lederberg
Assistant Professor of Genetics

CC: TMS